

To	RAY LA FORSE	From	VERHIES
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UNITED STATES DEPARTMENT OF COMMERCE
National Telecommunications and
Information Administration
Washington, D.C. 20230

92-28
October 15, 1993

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FEDERAL COMMUNICATIONS
COMMISSION
SECRETARY

Dr. Thomas P. Stanley
Chief Engineer
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

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Dear Dr. Stanley:

This letter is in response to your letter of October 7, 1993 regarding the use of the 5150-5250 MHz band for feederlinks serving low-earth orbit (LEO) Mobile Satellite Service (MSS) systems. As you know, NTIA is opposed to use of this band for MSS feederlinks due to FAA requirements. We note that the FAA participated in the FCC Negotiated Rulemaking (NRM) for Big LEOs and stated their opposition to use of the 5 GHz band for MSS feederlinks. NTIA has been working with the FAA to further define FAA requirements for the 5150-5250 MHz band.

Two of the MSS applicants have proposed using the 5150-5216 MHz band for their feederlinks and a third has expressed interest in this spectrum. However, other bands were seen as potential alternatives for the MSS feederlinks during the Big LEO Negotiated Rulemaking. NTIA has suggested to FCC staff that the 3600-3700 MHz band be further explored as a possibility. This band could be used with spectrum above 6400 MHz or with the 5850-5925 MHz band. These bands are already allocated in the United States and worldwide to the FSS and are presently lightly occupied by the FSS.

Evidently you have rejected these and other alternatives, such as use of the 4500-4800 MHz band (in the reverse direction), for MSS LEO feederlinks. We are ready to work with the Commission in defining and evaluating the various options to satisfy this need.

Regardless of the frequency band chosen, LEO feederlinks will very likely have to share spectrum with other services, either satellite, or terrestrial, or both. It is important for the LEO feederlink requirements to be realistic so that meaningful sharing assessments can be made. Such sharing is facilitated by the use of a small number of large earth stations in remote locations using low power signals, rather than a large number of earth stations as some applicants have proposed^{1/}.

1/ For example, Motorola and Loral/Qualcomm have talked about hundreds of feederlink earth stations. For other services the actual number of feederlink stations has been very small and reverse band operation is frequently employed.

Realistic requirements can then be used to further examine sharing possibilities. Such information would include the number of earth terminals (for each system and aggregate for all systems) planned for CONUS, possible locations of these terminals, technical characteristics such as pfd, minimum look angle and antenna radiation patterns. The objective would be to establish feederlinks that can be successfully coordinated with other services. It is not clear, based on information in the filings or in the NRM, that the feederlinks from multiple LEO systems can share the same spectrum. A better estimate of the total amount of spectrum needed is also required.

We will continue to work with FCC staff to find a mutually agreeable solution to the feederlink problem, recognizing that much of the spectrum being considered is shared and is thus joint jurisdictional. However, we cannot yet concur with your current proposal to allocate the 5 GHz band to MSS feederlinks.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Richard D. Parlow', with a stylized flourish at the end.

Richard D. Parlow
Associate Administrator

(97) 1002

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON, D.C. 20541

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92-28

IN REPLY REFER TO:

Mr. Richard Parlow
Associate Administrator
Office of Spectrum Management
United States Department of Commerce
National Telecommunications and
Information Administration
Washington, D.C. 20230

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Dear Mr. Parlow:

This letter is in reference to a proposal by three commercial satellite companies to use the 5150-5250 MHz band for feeder links serving low-Earth orbiting satellite systems. This proposal has been the subject of correspondence between the FCC, NTIA, and FAA because of a need identified by FAA to use these frequencies for navigational aids.¹ Since the Commission is currently preparing to finalize the spectrum allocation for the mobile satellite service above 1 GHz, the staff is considering a proposal to amend footnote US307 to allocate this band for MSS feeder links.²

The Final Report of the "MSS above 1 GHz Negotiated Rulemaking" committee, on which the FAA participated, states that if the FCC determines that the 5150-5250 MHz band is the only spectrum below 15 GHz that can satisfy the identified MSS/RDSS feeder link requirements, the FCC should consult with the Interdepartment Radio Advisory Committee (which also includes an FAA representative) and the National Telecommunications and Information Administration to identify conditions under which

¹ For example, see memoranda from William Torak, Chief, Spectrum Engineering Division, FCC, to William Gamble, Deputy Associate Administrator, Office of Spectrum Management, NTIA, dated February 5, 1993; and from Gerald J. Markey, Manager, Spectrum Engineering and Policy Division, FAA, to William Gamble, dated January 29, 1993.

² See Notice of Proposed Rule Making (Notice), ET Docket 92-28, 7 FCC Rcd 6414 (1992). In the Notice the Commission discussed allocating the 5150-5250 MHz band for MSS feeder links but decided not to propose the band for this use. However subsequently, the Commission referred the issue of using these bands for MSS feeder links to the "MSS above 1 GHz Negotiated Rulemaking" Advisory Committee. The FAA participated in the deliberations of this committee and the committee's final report proposed that this band be considered for feeder link operations.

Mr. Richard Barlow

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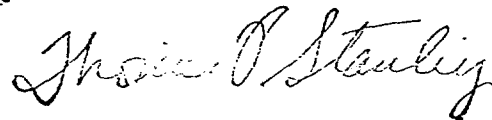
sharing with aeronautical radionavigation would be feasible. We now believe that the 5150-5250 MHz band is the most appropriate band for MSS feeder links.

It appears that the FAA requirements for Global Positioning and Automatic Dependent Surveillance are not final. However, the requirements for the three commercial satellite systems (Constellation, Ellipsat, and Loral) are immediate and fully supported by pending mobile-satellite service license applications. Not providing adequate spectrum for feeder links now would delay implementation of MSS and impair the United States' lead in the delivery of MSS worldwide.

At WARC-92, the FCC and NTIA successfully cooperated to have a mobile-satellite service spectrum allocation identified in the international Radio Regulations. Since our position at WARC-92 was to seek a generic approach to mobile-satellite spectrum allocations, it would be logical to continue that approach for MSS feeder links. We note the 5000-5250 MHz bands are already allocated internationally for feeder links in conjunction with the aeronautical radionavigation and/or aeronautical mobile (R) services (international footnote 797). Further, the 5150-5216 MHz band is allocated for feeder links for the radiodetermination-satellite service (international footnote 797A). Thus, it would be appropriate to use the 5150-5250 MHz band for MSS feeder links.

We would welcome your view before we propose an allocation for MSS feeder links in the 5150-5250 MHz band. Unless a concrete need is demonstrated by other parties, we plan to recommend that the Commission propose this allocation.

Sincerely,



Thomas P. Stanley
Chief Engineer